

Instructional Strategies for Students with Autism

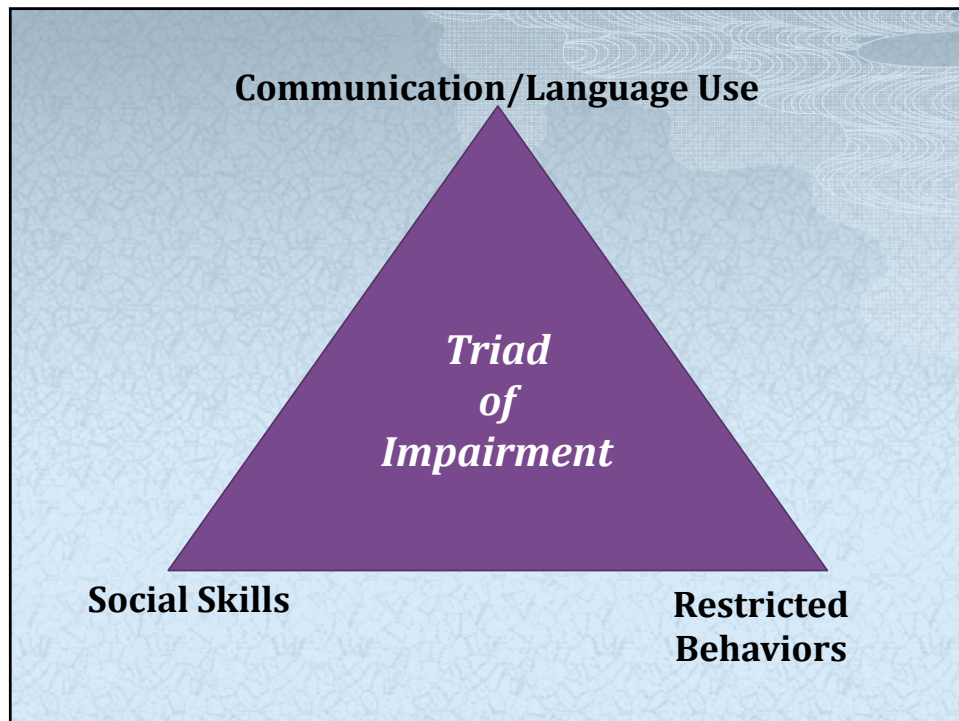
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Resources:

<http://r4strategiesasd.wikispaces.com/>



Communication / Language Use Impairments

- Some children never develop spoken language
- For others, language problems are typically pragmatic
- May be very literal
- Trouble reading non-verbal communication, such as facial expressions, body language, or body space
- Difficulty understanding that other people may have a different perspective

Impairments in Social Interaction

- May prefer to be alone; Aloof manner
- May show little interest in making friends, or may have interest but lack the skills to do so
- Difficulty understanding social rules such as turn-taking or sharing
- Does not “read” or understand feelings of others
- Lack of emotional reciprocity; brutally honest
- Difficulty seeing another person’s perspective

Restricted & Repetitive Behavior

- May insist on sameness, struggling with even *minor* changes to the environment
- Obsessive interest in item, idea, activity
- Intense focus on specific topic(s), whether playing alone or during interactions
- May prefer to repeat the same activities in a variety of situations, such as lining up objects
- Tends to prefer consistency in setting and routines

Facts and Stats on Autism

- 1 in 88 children
 - 23% increase since 2009
 - 78% increase since 2007
- 5x more common among boys (1 in 54) than girls (1 in 252)
- Largest increases over time are among Hispanic children (110%) and African American children (91%)
- It can cost \$3.2 million to take care of a person with autism over his or her lifetime
- Caring for all people with autism over their lifetimes costs an estimated \$35 billion per year

Evidence Based Practices

1. National Professional Development Center on Autism Spectrum Disorders
(<http://autismpdc.fpg.unc.edu>)
2. National Standards Project
(<http://www.nationalautismcenter.org/nsp/>)

1. Prompting



When to Prompt

1. For new skills (unlearned)

- Prompt before the error can occur



Errorless Prompting

- Used for new skills/content, because the student will likely make errors until it has been taught over time
- Requires you to fade the prompt over time
- Important: Do a “transfer trial” to fade the prompt. Why?
 - Allows for independent responding & faster acquisition
 - Prompt dependency will be reduced

When to Prompt

2. Once the student has learned the skill

- Used once an error has *already* occurred



Error Correction Prompts

How?

1. Stop the error or “re-set” the environment to how it was before the error occurred prior to the instruction
 2. Re-present the instruction
 3. Give student the correct response immediately
- Use time delay to allow responding to occur
 - Important: Do a “transfer trial” to fade the prompt.

2. Reinforcement



Selecting Reinforcers

1. Conduct a preference assessment to determine what the student is interested in, and the preference value (high/low) in relation to other items/activities
 - Ask the student, parent, teacher ★
 - Formal assessments: go/no go; forced-choice; multiple stimulus ★ ★ ★
2. Determine if preferred items/activities are actually reinforcers
 - If behavior increases = reinforcer
 - If behavior stays the same = preference

Where Reinforcement Programs Go Wrong..



- ❑ Behaviors to reinforce are included, but there is no consensus on behavior(s) to **not** reinforce
- ❑ Not determining the “schedule of reinforcement”
 - ❑ Frequency: After a certain number of responses (fixed/variable)
 - ❑ Duration: After a certain amount of time (fixed/variable)
- ❑ Using items/activities that are not actually reinforcing (preference vs. reinforcer)

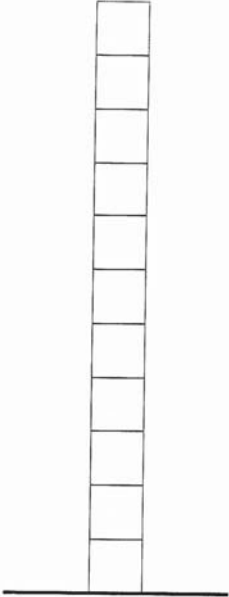
Where Reinforcement Programs Go Wrong..

- ❑ Student has access to reinforcers at other times
- ❑ Student is not given enough of the reinforcer (time/amt)
- ❑ Student is given too much of the reinforcer (time/amt)
 - ❑ Instead: break a 30 minute “work” period into 3 separate 10-minute periods with 5 min. breaks after each (versus a 15 minute break at the end)
- ❑ The requirements to get the reinforcer are too difficult

Using Reinforcement Effectively

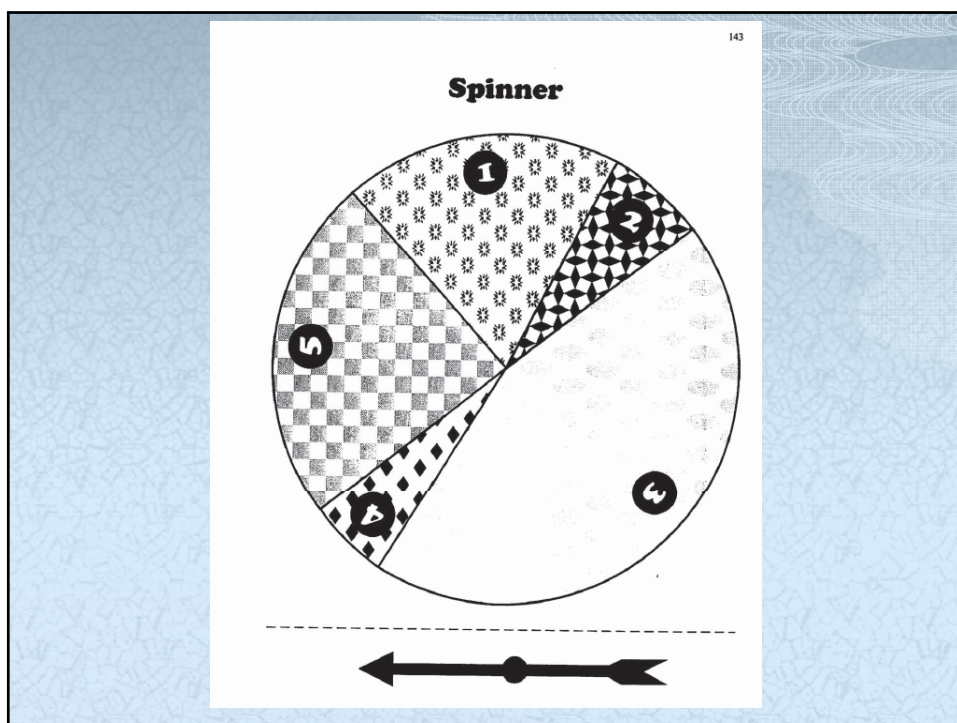
- ☐ No “freebies” (unless a non-contingent reinforcement system is in place..)
- ☐ Pair specific verbal praise
- ☐ Use only as much reinforcement as is needed
- ☐ Give students choices between reinforcer options
- ☐ Vary the available reinforcers throughout the day
- ☐ Give more reinforcement for better performance

Reinforcement Tower



Name _____

The image shows a worksheet titled "Reinforcement Tower". It features a vertical column of ten empty rectangular boxes, intended for students to place markers or stickers to track reinforcement. Below the tower is a horizontal line with the word "Name" followed by a blank space for the student's name.



3. Task Analysis



Uses for Task Analysis

* Multi-step behaviors/events

1. Self-help

- Dressing
- Bathroom routines (hand-washing, brushing teeth)

2. Routines

- Specific classroom activities
- Entering & transitioning from classroom
- Cafeteria / Gym / Art class
- Morning / End of school day

Example: Morning routine

1. Enter classroom
2. Put backpack and materials in cubby
3. Sit at desk
4. Get out pencil & journal
5. Write instructions from whiteboard
6. Complete activity



4. Discrete Trial Teaching



What is Discrete Trial Training?

Discrete Trial Training (DTT) is a method of teaching new skills, consisting of a series of repeated lessons or “trials” taught 1-on-1. It is used primarily for teaching new responses and skills

DTT is one of the most extensively studied approach for teaching skills to children with autism.

Why Use DTT?

- ❑ Tasks are broken down into short and simple trials, maximizing learning opportunities and minimizing “down time”
- ❑ Builds a connection for the student between responding and positive outcomes, increasing motivation
- ❑ Best for teaching new behaviors

Discrete Trial Training (DTT)

1. Instruction: The teacher presents a brief, clear instruction or question, such as “Do this” or “What is it” (called the “discriminative stimulus (SD)” (A).
2. Prompting: At the same time as the SD, or immediately after it, the teacher assists the student in responding correctly to the instruction. Example: taking the child’s hand and guiding him/her to make the correct response.
 - As the student progresses, prompts are gradually “faded” out and ultimately eliminates the prompt so that the child learns to respond to the instruction alone
3. Response: The student responds to the instruction (B) The student’s response is evaluated as correct or incorrect. “No responding” is typically counted as incorrect for data collection purpose.

Discrete Trial Training (DTT)

4. Consequence:
 - Correct: If the student responds correctly, the teacher immediately reinforces the response.
 - Incorrect: Prompting/assistance is provided for incorrect responding
5. Inter-trial interval: A clear wait time is inserted after each trial before moving to the next. Why is an ITI needed?

Discrete Trial Training

Examples:

Instruction (A)	Prompt	Response (B)	Consequence (C)	ITI
Where is the car?"		Student selects car	Reinforce	

Instruction (A)	Prompt	Response (B)	Consequence (C)	ITI
"How old are you?"		"Seven"	Reinforce	

Instruction (A)	Prompt	Response (B)	Consequence (C)	ITI
"What is this?" (fork)		"Fork"	Reinforce	

Instruction (A)	Prompt	Response (B)	Consequence (C)	ITI
"Go get your shoes"		Student gets shoes	Reinforce	

Instruction (A)	Prompt	Response (B)	Consequence (C)	ITI
"Do this" (T. claps)		Student imitates	Reinforce	

5. Social Skills Instruction

- ❑ Social skills need to be taught explicitly to students with autism spectrum disorders (*mirror neurons)
- ❑ Typical experiences alone tend to be too subtle to develop the various social skills inherent in play, conversation and interaction with others



Social Skills Strategies

1. Social stories
2. [Comic strip conversations](#)
3. [Social autopsies](#)
4. Video Modeling

Video Modeling

3 Types:

1. Traditional: Adult/peer completes the behavior(s)
2. Video self-modeling: Student completes the behavior(s)
3. Point-of-view: Camera viewpoint is what student sees

Some areas of use:

- ❑ Desired behaviors: *in classroom, hallway, during activities, etc.*
- ❑ Self-help & functional skills: *dressing*
- ❑ Social skills: *joining a game in progress*
- ❑ Communication skills: *asking for help*
- ❑ Academic behaviors: *steps to complete assignments*

5. Other Interventions

Shaping

- ❑ Shaping is a process of reinforcing closer and closer approximations of a behavior being taught
- ❑ When the desired behavior is not easy to acquire through traditional instruction methods (i.e., prompts), approximations are taught first and reinforced. Over time, these more closely resemble the “target behavior”
- ❑ Reinforcement requirements are gradually adjusted to produce closer and closer approximations to the desired response
- ❑ Throughout shaping, only the approximation being used at the time is reinforced, while any previous approximations are not reinforced

Shaping

- ❑ How quickly a student responds to shaping will depend on his/her learning rate and the value of the reinforcer

Examples of behaviors that shaping can be used for:

- Refining motor movements
- Increasing the number of academic problems completed
- Decreasing compliance time after instructions are given
- Increasing the length of time a student is on task
- Increasing in-seat behavior
- Increasing/decreasing voice volume



Shaping

Implementation:

1. Determine what the final behavior will look like
2. Consider the learner's *current* level of performance
3. Identify the next logical and realistic step towards what behavior should look like in its final form
4. Reinforce performance at that step of development
5. Once the student is using this approximation consistently, teach the next approximation.
6. Reinforce the new approximation only, not previous ones
7. Repeat this process until behavior is ultimately shaped into the desired behavior

5 Point Scale

How Loud Is My Voice?		
5	"Screaming" Use if you need help or there is an emergency – only	
4	"Yelling" Use this voice to yell at friends outside from far away	
3	"Outside Play Voice" Use this voice to play with friends who are running and playing outside	
2	"Talking voice" Use this voice in the classroom to talk to someone nearby	
1	"Whispering – very quiet!" Use this voice when you don't want others to hear what you are saying	

Natural Environment Teaching (NET)

- ❑ Focus is *generalizing* skills acquired in DTT, as well as teaching new skills and appropriate play.
- ❑ Uses stimuli in the natural environment to teach a variety of skills (requesting, labeling, compliance, sharing, social skills, etc.)
- ❑ Unlike DTT, NET is informal, less structured, and the reinforcement given for correct responding is generally related to the child's interest at the moment.

Using NET Effectively

- ❑ NET is not always preplanned. It should be implemented whenever opportunities occur (i.e., classroom, hallway, gym)
- ❑ Use prompts as necessary for successful responding
- ❑ Use frequent verbal praise for correct responding
- ❑ Make frequent comments about what the student is doing:
 - Example: “Wow, you’re pushing the car up the ramp”

“Pairing”

- ❑ During early interactions with students:
 - Don’t see you as a source of value to them, either as someone who provides good things (pos. reinforcement), or makes aversive things better (neg. reinforcement)
 - May consider you to be aversive if demands are too early, frequent, or difficult
- ❑ “Pairing” is a process of conditioning a staff member (or peer) to be a source of value

Priming

- ❑ Prepares the student for a variety of things:
 - Transitions
 - Social situations
 - Schedule changes
 - Activities
- ❑ Provides predictability and structure
- ❑ Reduces anxiety

Don't Forget about Extinction

- ❑ We typically focus on reinforcement & punishment
- ❑ Extinction is a valuable tool when used to address the function(s) of a problem behavior

How?

- Attention: planned ignoring
- Escape/Avoidance: escape extinction
- Tangible: access to items/activities is prevented
- Automatic/sensory: block sensory input

What you Should Know

- ❑ Is a problem behavior a result of:
 - Skill deficit?
 - Motivational deficit?
- ❑ For students without spoken language, become familiar with augmentative communication being used (PECS / Sign Language / VOD). Why??
- ❑ Student's schedule of reinforcement
- ❑ The average length of time or the number of tasks a student can complete before a break/reinforcement

What to AVOID

- ❑ Emotional reactions...stay neutral
- ❑ Use eye contact (or lack of) based on the students' behavior. Example: no eye contact during escape ext.
- ❑ Multi-step instructions
- ❑ Not sharing BIP with all staff who interact with student